



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/594,884	02/22/2007	Fumio Kato	INA-0005	8135
74384 7590 08/31/2009 Cheng Law Group, PLLC 1100 17th Street, N.W. Suite 503 Washington, DC 20036				
EXAMINER				
JOYNER, KEVIN				
ART UNIT		PAPER NUMBER		
1797				
MAIL DATE		DELIVERY MODE		
08/31/2009		PAPER		

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/594,884

Applicant(s)

KATO, FUMIO

Examiner

KEVIN C. JOYNER

Art Unit

1797

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 22 February 2007.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-5 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-5 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 29 September 2006 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-8508)
- Paper No(s)/Mail Date _____

- 4) ☐ Interview Summary (PTO-413)
- Paper No(s)/Mail Date _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

Claim Rejections - 35 USC § 112

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claim 5 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. More specifically, claim 5, which depends from claim 3, recites the limitation "an inclined plate group" in line 4 of the claim. Therefore, it is unclear whether the applicant is referring to the "inclined plate group" of claim 3, or a second inclined plate group. Therefore, the claim is rendered indefinite.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claims 1 and 2 are rejected under 35 U.S.C. 102(b) as being anticipated by Hirahara (U.S. Patent No. 4,214,013).

Hirahara discloses a sterilizer comprising:

A hopper (33) in which powders and grains are filled;

A first rotary valve (24) disposed under said hopper (Figure 1); and

A second rotary valve (34) formed under said first rotary valve;

Wherein an airtight space (12), allowing therethrough travel of said powders and grains, is formed between said first rotary valve and said second rotary valve (Figure 1), said airtight space being communicated with a saturated steam injection pipe (56) injecting a saturated steam into said airtight space (column 5, lines 32-68). Concerning claim 2, the reference continues to disclose that the first and second rotary valves are configured as being adjustable in the rotating speeds (column 6, lines 1-8; column 8, lines 1-15). Furthermore, said valves are fully capable of being configured to rotate in directions reverse to each other.

5. Claim 1 is rejected under 35 U.S.C. 102(b) as being anticipated by Ishii (U.S. Patent No. 6,183,798).

Ishii discloses a sterilizer comprising:

A hopper (13) in which powders and grains are filled;

A first rotary valve (RV1) disposed under said hopper; and

A second rotary valve (RV2) formed under said first rotary valve (Figures 3 and 6),

Wherein an airtight space, allowing therethrough travel of said powders and grains, is formed between said first rotary valve and said second rotary valve (column 4, lines 25-45), said airtight space being communicated with a saturated steam injection pipe (2 & 2b) injecting saturated steam into said airtight space (see columns 4 and 6).

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. Claim 3 is rejected under 35 U.S.C. 103(a) as being unpatentable over Ishii (U.S. Patent No. 6,183,798) in view of Takei et al. (U.S. Patent No. 7,112,244).

Ishii is relied upon as set forth above. Ishii does not appear to disclose a drier as set forth in claim 3. Takei discloses an apparatus treating grains and powders comprising a hopper (19A) with a set of valves producing a space between said valves (columns 8-10). The reference continues to disclose that the apparatus further comprises a drier that includes:

An inclined plate group in which plates on one side inclined in one direction, and plates on the other side inclined in the other direction, receiving the powders and grains dropped from said plates (11a, 21a and 31a) on one side, are disposed as being alternately staggered, with a large number of fine perforations formed therein (column 9, lines 5-15 and 35-55; Figures 1 and 2); and

A heating air supplier (35) supplying upward a heating air from the lower side of the said inclined plate group (column 3, lines 63-68; Figure 2). Takei discloses that said drier allows the products to dry without the need of stopping said process (i.e. a continuous process; column 7, lines 1-15). Thus, it would have been obvious to one of ordinary skill in the art at the time of the invention to modify the apparatus of Ishii to

include the drier of Takei in order to provide a drying process in the apparatus without the need of stopping the process as exemplified by Takei.

8. Claim 4 is rejected under 35 U.S.C. 103(a) as being unpatentable over Ishii (U.S. Patent No. 6,183,798) in view of Takei et al. (U.S. Patent No. 7,112,244) as set forth above with respect to claim 3, and further in view of Lunsford, Jr. et al. (U.S. Patent No. 3,841,836).

Ishii in view of Takei is relied upon as set forth above. Ishii in view of Takei does not appear to disclose that the inclined plate group is configured as being adjustable in the angle of inclination of each of said plates. Lunsford discloses an apparatus for heating and drying a flowable material such as a powder or grain, wherein the apparatus comprises an inclined plate group (Figure 1) that are disposed as being alternately staggered, wherein said inclined plates are configured as being adjustable in the angle of inclination in order to control the amount of time that the product directly contacts said angled plates (abstract). Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to modify the apparatus of Ishii in view of Takei to configure the plates to allow said plates to be adjusted in the angle of inclination in order to control the amount of time that the product directly contacts said angled plates as exemplified by Lunsford.

9. Claim 5 is rejected under 35 U.S.C. 103(a) as being unpatentable over Ishii (U.S. Patent No. 6,183,798) in view of Takei et al. (U.S. Patent No. 7,112,244) as set forth

above with respect to claim 3, and further in view of Sietmann et al. (U.S. Patent No. 3,943,636).

Ishii in view of Takei is relied upon as set forth above with respect to claim 3. Ishii in view of Takei does not appear to disclose a cooler disposed on the lateral side of the inclined plate group. Sietmann discloses an apparatus for drying grains and powders including a hopper (62) and a dryer (10) comprising an inclined plate group (60), wherein said plates are inclined in opposite directions with a large number of perforations thereon (column 3, lines 30-55) and a heating air supplier (58) supplying upward heating air from the lower side of the inclined plate group (column 5, lines 44-46). The reference continues to disclose that the dryer comprises a cooling air supplier (30) disposed on the lateral of said inclined plate group that supplies upward cooling air from the lower side of the inclined plate group in order to cool the heated grain and conserve energy during the drying operation (column 2, lines 10-15; column 5, lines 50-60). Thus, it would have been obvious to one of ordinary skill in the art at the time of the invention to modify the apparatus of Ishii in view of Takei to include a cooling air supplier on the lateral side of the inclined plate group in order to cool the heated grain and conserve energy during the drying process as exemplified by Sietmann.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to KEVIN C. JOYNER whose telephone number is (571)272-2709. The examiner can normally be reached on M-F 8:00-4:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jill Warden can be reached on (571) 272-1267. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

KCJ

/Sean E Conley/
Primary Examiner, Art Unit 1797